



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,037	07/02/2001	Roger Timmis	WEYE116514	1285

26389 7590 09/27/2004

CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC
1420 FIFTH AVENUE
SUITE 2800
SEATTLE, WA 98101-2347

EXAMINER

LANKFORD JR, LEON B

ART UNIT	PAPER NUMBER
----------	--------------

1651

DATE MAILED: 09/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/700,037

Applicant(s)

TIMMIS ET AL.

Examiner

Leon Lankford

Art Unit

1651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-40 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 27-40 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Art Unit: 1651

This office action replaces the office action of 4/6/2004 as per the examiner's discussion with Ms. Shoko Leek, applicant's representative. The previous action was withdrawn in order for the examiner to consider pertinent issues raised by the filing of divisional applications, 10/680675 & 10/680676. At this time, no double patenting rejections have been made, however as the claims in the related cases are amended bringing divergent subject matter closer together (possibly), the issue of double patenting will be revisited.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 27-40 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Further, the claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicant has amended the claims to use "quantifiable characteristics" however the issue of description still remains. The examiner still contends after reading applicant's arguments that applicant has not demonstrated that embryos selected by the

Art Unit: 1651

classification method using the spectral data would demonstrate the same “quantifiable characteristic”, e.g. germination, and thus no correlation has been established.

Applicant claims a method for classifying plant embryo “according to their quantifiable characteristics,” yet within the specification as originally filed, there is no clear correlation drawn between the data collected and compared and the desired “characteristic,” i.e. the ability to germinate, of an embryo. Applicant has not clearly established what the correlation is and thus it is unclear that applicant actually had within their possession a method for actually classifying plant embryo quality.

Applicant theorizes that the raw spectral data analysis of embryo can be standardized such that a known desirable standard can be used to determine the desirability of embryos by analyzing the spectral data produced thereby, however this has not been demonstrated. The specification explains how to obtain raw data however the specification does not describe the claimed invention. Applicant has not described the invention in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. There is no description of how the data can be effectively used. The invention has not been adequately described.

It follows logically that the claimed invention has not been enabled by the instant specification because applicant has not taught how to classify embryos wherein the “spectral data” of an embryo is used as a standard to which embryos of unknown “characteristics” are compared wherein if the data matches(?) then the unknown is classified as having the same characteristic which would appear to be applicant’s invention. The specification shows no correlation between “spectral data” and desired

characteristics but only between “the spectral data” of one embryo and “the spectral data” of a subsequent embryo.

It would appear that applicant is claiming that if an unknown embryo has the same “spectral data” as the reference embryo then it has the same desired “characteristic”, i.e. the ability to germinate, but applicant has not set forth how a different result is to be classified. Thus applicant has not described or enabled how to classify an embryo. What parameters or data would show that an embryo is of lesser desired characteristic? Greater desired characteristic? There appears to be no indication of how the reference and model are used to classify the desired “characteristic” of an embryo.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what exactly a “quantifiable characteristic” is in the instant claims. The claims do not distinctly point out and particularly claim the subject matter which applicant regards as their invention because the intended scope of “quantifiable characteristics” is unclear. It would appear that applicant is intending to claim that embryos can be classified via their spectral data to determine if an embryo has a desired “quantifiable characteristic”, i.e. the ability to germinate, however the claims are not so limited. The claims as drafted might read on merely quantifying the spectral data of an

embryo thus the data itself is a “quantifiable characteristic” but that would not appear to be applicant’s invention. The scope of “quantifiable characteristic” is unclear and thus the claims indefinite.

Further the claims do not properly define the invention because the claims do not clearly set forth how the data collected and the classification model are used to classify an embryo. It would appear that applicant is claiming that if an unknown embryo has the same “spectral data” as the reference embryo then it has the same quality but applicant has not set forth how a different result is to be classified. What parameters or data would show that an embryo is of lesser “characteristic”? Greater “characteristic”?

Please note that the language of a claim must make it clear what subject matter the claim encompasses to adequately delineate its "metes and bounds". See, e.g., the following decisions: In re Hammack, 427 F 2d. 1378, 1382, 166 USPQ 204, 208 (CCPA 1970); In re Venezia 530 F 2d. 956, 958, 189 USPQ 149, 151 (CCPA 1976); In re Goffe, 526 F 2d. 1393, 1397, 188 USPQ 131, 135 (CCPA 1975); In re Watson, 517 F 2d. 465, 477, 186 USPQ 11, 20 (CCPA 1975); In re Knowlton 481 F 2d. 1357, 1366, 178 USPQ 486, 492 (CCPA 1973). The courts have also indicated that before claimed subject matter can properly be compared to the prior art, it is essential to know what the claims do in fact cover. See, e.g., the following decisions: In re Steele, 305 F 2d. 859, 134 USPQ 292 (CCPA 1962); In re Moore 439 F 2d. 1232, 169 USPQ 236 (CCPA 1969); In re Merat, 519 F 2d. 1390, 186 USPQ 471 (CCPA 1975).

Art Unit: 1651

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Chi et al (*J of Fermentation and Bioengineering* Vol81(5)) and/or Vits et al(*AIChE Journal* Vol40(10)).

Because of the 112 problems indicated above, it is difficult to compare the claims to the prior art however in the interest of compact prosecution the apparent closest prior art is being applied.

Art Unit: 1651

Chi and Vits teach collecting visual and spectral data from somatic embryos to quantify the morphology and thus the stage of the embryos. It is unclear if the reference reads directly on the claimed invention however where applicant's invention would read on visually or spectrally assessing the morphology of embryos and determining the stage of the embryo using algorithms, the references would anticipate the claim subject matter.

Wherein the invention is not anticipated, an invention different than the methods of the references of record because of a different mathematic means for comparing embryos would have been obvious wherein the algorithm used is a known statistical means for comparing similar types of data.

Wherein "quantifiable characteristic" could read on any data collected, the claimed invention would be clearly obvious because applicant's claim would call for the measuring of the spectral data of an embryo (1) and then measuring the spectral data of another (2) to see if they are the same and classifying the data (a quantifiable characteristic?) as the same for embryo 2 as embryo 1 if the numbers match.

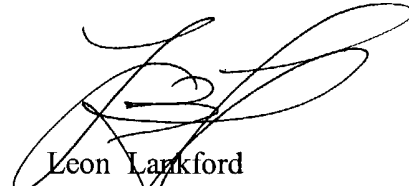
Accordingly, the claimed invention was at least prima facie obvious to one of ordinary skill in the art at the time the invention was made especially in the absence of evidence to the contrary.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leon Lankford whose telephone number is 571-272-0917. The examiner can normally be reached on Mon-Thu 7:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1651

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Leon Lankford
Primary Examiner
Art Unit 1651

LBL